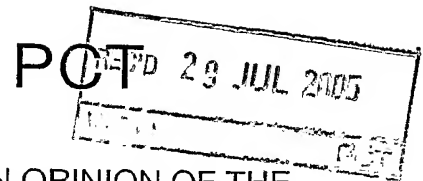


PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220



WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2005/012460

International filing date (day/month/year)
12.04.2005

Priority date (day/month/year)
13.04.2004

International Patent Classification (IPC) or both national classification and IPC
C08L65/00, C08L79/02, C08K5/00, H01L51/30, H01B1/12

Applicant
E.I. DUPONT DE NEMOURS AND COMPANY

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2005/012460

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. II Priority

1. ☒ The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43*bis*.1 and 64.1) is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2005/012460

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	13-15
	No: Claims	1-12,16-19
Inventive step (IS)	Yes: Claims	-
	No: Claims	1-19
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	-

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V.

1 Reference is made to the following documents:

- D1 : WO 03/046540 A (ACREO AB; NILSSON, DAVID, ANDREAS; BERGGREN, MAGNUS; SVENSSON, JAN, PE) 5 June 2003 (2003-06-05)
- D2 : US 5 185 100 A (HAN ET AL) 9 February 1993 (1993-02-09)
- D3 : HIRAI T ET AL: "ELECTROCHEMICAL BEHAVIORS OF POLYPYRROLE, POLY-3-METHYLTHIOPHENE, AND POLYANILINE DEPOSITED ON NAFION-COATED ELECTRODES" JOURNAL OF THE ELECTROCHEMICAL SOCIETY, ELECTROCHEMICAL SOCIETY. MANCHESTER, NEW HAMPSHIRE, US, vol. 135, no. 5, 1 May 1988 (1988-05-01), pages 1132-1137, XP000053311, ISSN: 0013-4651
- D4 : DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; 23 March 1991 (1991-03-23), MORIMOTO, TAKESHI ET AL: "Solid electrolytic capacitor having electrically conductive polymer on dielectric oxide film" XP002336207 retrieved from STN Database accession no. 1991:113460
- D5 : KITANI, A.; YOSHIOKA, K.; MAITANI, S.; ITO, S.: "Properties of Elastic Polyaniline" SYNTHETIC METALS, vol. 84 (1-3), 1997, pages 83-84, XP002336200
- D6 : WO 2004/029176 A (E.I. DU PONT DE NEMOURS AND COMPANY) 8 April 2004 (2004-04-08)

2. INDEPENDENT CLAIM 1

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not novel in the sense of Article 33(2) PCT. Each of the documents D1-D6 discloses composites comprising a first layer comprising at least one doped conductive polymer and a second layer comprising a material selected from a colloid-forming polymeric acid and its salt and a non-polymeric fluorinated organic acid and its salt (D1: page 1, line 1 - page 2, line 31; page 13, line 24 - line 29; example 2; D2: example 5; D3: abstract; D4: abstract; D5:

items 2. and 3.; D6: examples).

- 2.2 Since the subject-matter of present claim 1 is not novel in the sense of Art. 33(2) PCT, it does not meet the requirements of Art. 33(3) PCT.
- 2.3 The subject-matter of present claim 1 is industrially applicable within the meaning of Art. 33(4) PCT.

3. DEPENDENT CLAIMS 2-19

- 3.1 Dependent claims 2-19 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).
- 3.2 The subject-matter of claims 2-19 of the present application is industrially applicable (Art. 33(4) PCT).

Re Item VIII.

4. Clarity (Art. 6 PCT)

- 4.1 Claim 1: It is not clear how the substituents R^1 being acrylic acid, phosphoric acid and phosphonic acid should be attached to the aromatic ring of formula (I). Furthermore, it is not stated that the conductive polymers are electroconductive (cf. page 1, line 5 of the present application).
- 4.2 Claims 3-5: The vague term 'about' renders the subject-matter of claims 3-5 unclear.
- 4.3 Claim 5: Two divergent definitions for a substituent R^3 are provided in claim 5 and on page 4, line 32 of the present application, thus rendering the subject-matter of claim 5 unclear.
- 4.4 Claims 9-12, 17 and 19: Claims 9-12, 17 and 19 relate to compositions and refer

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

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back to claim 1. However, claim 1 claims composites and no compositions. Hence, the subject-matter of claims 9-12, 17 and 19 is not clear (Art. 6 PCT).